

## A new species of the genus *Cybocephalus* (Coleoptera: Nitidulidae) with light head and pronotum from Iran

### Новый вид рода *Cybocephalus* (Coleoptera: Nitidulidae) со светлыми головой и переднеспинкой из Ирана

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*Cybocephalus (Cybocephalus) aonidiellae* sp. nov. (subfamily Cybocephalinae) collected on *Aonidiella orientalis* (Newstead, 1894) (Sternorrhyncha: Coccoidea: Diaspididae) hosted on Citrus (Rutaceae) is described from Iran.

Описан *Cybocephalus (Cybocephalus) aonidiellae* sp. nov. (подсемейство Cybocephalinae), собранный на *Aonidiella orientalis* (Newstead, 1894) (Sternorrhyncha: Coccoidea: Diaspididae), живущем на цитрусе (Rutaceae) из Ирана.

**Key words:** Iran, Coleoptera, Nitidulidae, *Cybocephalus*, Coccoidea, Diaspididae, *Aonidiella*, Rutaceae, Citrus, new species

**Ключевые слова:** Иран, Coleoptera, Nitidulidae, *Cybocephalus*, Coccoidea, Diaspididae, *Aonidiella*, Rutaceae, Citrus, новый вид

## INTRODUCTION

This new species is the second one recovered in the course of the current study. The first was described in Kirejtshuk & Fallahzadeh (2008). The type series of the species under description is deposited in the collection of the Zoological Institute of the Russian Academy of Sciences (St. Petersburg).

## RESULTS

### Ordo COLEOPTERA

### Subordo POLYPHAGA

### Superfamily CUCUJOIDEA

### Family NITIDULIDAE

### Subfamily CYBOCEPHALINAE

### Genus *Cybocephalus* Erichson, 1844

### Subgenus *Cybocephalus* Erichson, 1844

Type species: *Anisotoma exigua* C.R. Sa-hlberg, 1834 (= *Nitidula polita* Gyllenhal, 1813), recent.

### *Cybocephalus (Cybocephalus) aonidiellae* sp. nov.

(Figs 1–8)

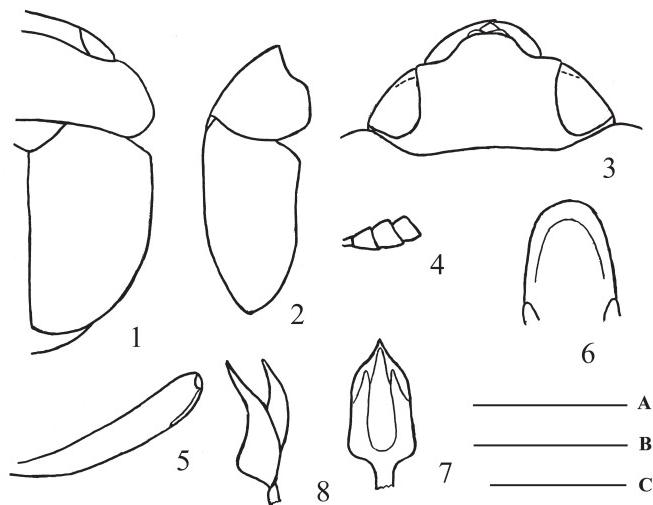
*Material examined. Holotype.* Male; Iran, Fars Province, Forg, Darab; 2 June 2009; coll. Majid Fallahzadeh; on *Aonidiella orientalis* (Newstead, 1894) (Sternorrhyncha: Coccoidea: Diaspididae) on Citrus.

*Paratypes.* Five males and 4 females with the same label as the holotype. One of the male paratype is desegmented.

*Diagnosis.* This new species is reminiscent of some Palaearctic and Indo-Malayan species with the lighter male head and appendages, and also not infrequently prothorax. However, the light prothoracic coloration can be rather stable in some species, but is unsteady to a variable degree in others. The same pertains to the puncturation and microsculpture of the dorsum. The new species differs from the congeners with similar coloration in the following characters:

— *C. (C.) aegyptiacus* Endrödy-Younga, 1968 in the somewhat finer elytral punctura-

**Figs 1–8.** *Cybocephalus (Cybocephalus) aonidiellae* sp. nov. 1, body outline; 2, elytron and pronotum; 3, anterior part of frons, labrum and mandibles; 4, antennal club; 5, protibia; 6, tegmen; 7, penis trunk; 8, idem. Dorsal view (1, 5, 7), ventral view (6), anterodorsal view (3) and lateral view (2, 8). Scales: A – to figs 1, 2, bar 0.7 mm; B – to figs 3–5, bar 0.4 mm; C – to figs 6–8, bar 0.2 mm.



tion, shorter frons with more concave places at antennal insertions, elytra with more truncate apices and deeper sutural angle, protibia with much shorter hairs and different shape of its apex, more acute penis apex;

– *C. (C.) assiduus* Kirejtshuk & Fallahzadeh, 2008 in the different protibial apex, not exposed labrum, much shorter hairs along outer edge of protibia, not truncate apex of tegmen and more acute penis apex;

– *C. (C.) binotatus* Grouvelle, 1908 in the lack of dark spots on the disk of pronotum, different apex of protibia, shorter aedeagus with rounded apex of tegmen and slightly curved penis trunk;

– *C. (C.) freyi* Endrödy-Younga, 1968 (according to the original description) in the mostly lightened male head and pronotum, outline of pronotal sides, narrower penis at the more acute apex;

– *C. (C.) kuznetzovi* Kirejtshuk, 1988 in the mostly lightened male head and pronotum, somewhat finer elytral puncturation, shorter frons between eyes (which are much more broadly arcuate at outer edge), gently arcuate apex of tegmen without long fine hairs and more gradually narrowing apex of penis (the apical hairs of tegmen in the specimens of *C. (C.) kuznetzovi* are sometimes rather fine and visible only in the high magnification);

– *C. (C.) mediterraneus* Endrödy-Younga, 1968 (according to the original description) in the mostly lightened male head and pronotum, different protibial apex, more elongate aedeagus with not subtruncate apices of tegmen and penis trunk;

– *C. (C.) nipponicus* Endrödy-Younga, 1971 (? = *undatus* Tian & Yu, 1994) (the later according to the original description) in the usually darker male head and pronotum, somewhat finer elytral puncturation, narrower protibia with gently outlined outer edge, longer aedeagus with rounded tegmen apex and slightly curved penis trunk;

– *C. (C.) nitens* Wollaston, 1867 (according to Endrödy-Younga, 1968) in the mostly lightened male head and pronotum, different protibial apex, narrower penis trunk, with more acute apex and gently arcuate apex of tegmen;

– *C. (C.) pangii* Yu & Tian, 1995 (according to the original description) in the mostly lightened male head and pronotum, different protibial apex, much longer aedeagus, not emarginate apex of tegmen and more acute apex of penis;

– *C. (C.) politissimus* Reitter, 1898 (= *flavocapitatus* Tian & Yu, 1994) in the mostly lightened male head and pronotum (but not so reddish), less shining dorsum, different protibial apex, more truncate apex

of last antennomere, tegmen gently arcuate at apex and without short hairs, penis trunk much longer and with more acute apex;

– *C. (C.) politus* (Gyllenhal, 1813) in the narrower protibia with very different apex, longer penis with longer medial lobe and shorter lateral ones;

– *C. (C.) pullus* Endrödy-Younga, 1968 (according to the original description) in the mostly lightened male head and pronotum, similar apex of protibia, tegmen with gently arcuate and not haired apex, more acute apex of penis;

– *C. (C.) rufifrons* Reitter, 1874 in the mostly lightened male head and pronotum, less arcuate outer edge of eyes, somewhat shorter ultimate antennomere, narrower protibia with different apex, arcuate and not haired apex of tegmen, more acute penis apex;

– *C. (C.) sphaerula* (Wollaston, 1854) (according to Endrödy-Younga, 1968) in the different protibial apex, not angular apex of tegmen and not so elongate penis apex;

– *C. (C.) tibialis* Endrödy-Younga, 1968 (according to the original description) in the different protibial apex, not emarginate apex of tegmen and more acute apex of penis;

– *C. (C.) taiwanensis* Tian & Pang, 1994 (according to the original description) in the longer frons, different protibial apex, not emarginate apex of tegmen and more acute apex of penis;

– *C. (C.) tryapitzini* Kirejtshuk, 1984 in the short labrum, different protibia, much longer not emarginate and unhaired apex of tegmen and more acute apex of penis trunk.

The outstanding feature of the new species is the angle of the most width of pronotal side at the midline much more projecting than in other species and its pronotum comparatively longer than in most consubgenera. Another character, which is more characteristic of the new species than others (somewhat like those in *C. (C.) aegyptiacus*), is that its elytra somewhat shorter than in other cases and leaving the pygidium uncovered in all specimens of the type series. Finally, all tibiae of *Cybo-*

*cephalus aonidiellae* sp. nov. are subequal in width.

*Description of holotype* (male). Length 1.2 (with not deflected head), width 0.8, height 0.5 mm. Elongate oval; meso-metathoracic segments, and also elytra and eyes dark brown to blackish; head, prosternum and appendages yellowish; pronotum brownish; rather convex dorsally and slightly convex ventrally; dorsum moderately shining and underside with a slight shine; dorsum with very sparse, very short and hardly conspicuous hairs, much shorter than distance between their insertions; underside with rather dense and conspicuous hairs, about 2.5 times as long as distance between their insertions.

Head and pronotum with some trace of weak and extremely fine alutation and with extremely fine and rather sparse puncturation. Elytra with punctures somewhat larger than those on head and pronotum, interspaces between them finely and somewhat smoothly microreticulated. Pygidium and underside with rather shallow and frequently indistinct punctures, nearly as large as eye facets in diameter; interspaces between them about as great as a puncture diameter and irregularly microreticulated.

Head weakly convex, with a frons slightly projecting anteriorly, almost two-thirds as long as distance between very large eyes (composed of moderately large facets); eyes extended on underside only in anterior part. Labrum scarcely exposed from under frons. Mandibles very slightly exposed from under frons. Antennae 11-segmented and with last antennomere obliquely truncate at apex. Pronotum widest at the middle, about three fifths as long as wide and about one and two-thirds times as long as elytra, rather and evenly convex, with strongly sloping sides, its anterior edge feebly bisinuate, lateral edges subangular, posterior edge shallowly emarginate. Scutellum widely subtriangular and with widely rounded apex. Elytra slightly shorter than wide combined, their sides slightly arcuate and apices widely rounded forming at

suture a shallow but distinct sutural angle. Pygidium very widely arcuate at apex and anal segment clearly exposed from under it. Distance between metacoxae markedly greater than that between mesocoxae and about three fourth as length of metatibia. Metaventrite about one and one third times as long as abdominal ventrite 1, its posterior edge between coxae rectilinearly truncate. Abdominal ventrite 1 about twice times as long as hypopygium and about twice as long as ventrites 2–4 combined. Submetacoxal line of usual configuration. Hypopygium widely emarginate at apex.

All tibiae slightly narrower than antennal club and subparallel-sided; hairs along outer edge of protibiae rather shorter than those of meso- and metatibiae. Pro- and mesofemora about 2.5 times and metafemora 3.5 times as wide as corresponding tibiae, metafemur about 2.5 times as long as wide, with both anterior and posterior edges slightly convex, although anterior and posterior edges of metafemur much more convex. Tarsi of moderate length and rather narrow, tarsomeres 1–3 narrowly lobed.

Aedeagus moderately sclerotised.

*Female.* Outwardly differs from the male in the widely rounded apices of pygidium and hypopygium and also in the darker

head and pronotum, almost unicoloured dark brown to blackish body with somewhat lighter underside of head and prosternum, and also lighter lags and antennae.

*Variations.* Length 0.9–1.2 (with deflected head) mm (females in general larger). The puncturation of the elytra is sometimes much more expressed than that on those in the holotype.

*Etymology.* The epithet of this new species is formed from the generic name of its sternorrhynchal host.

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